



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

RB6872477
Job Sheet 196876



Part No: RB6872477

Job Qty: 1 pcs

Part Name: Spanner Power Turbine Coupling Inner Nut Wrench



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 6/24/19

Job Tracking No:

Created By: Kimberley Guerin

Due Date: 7/29/19

Description:

Type: Stock

Note: DWG RB6872477 Rev 0 IPP Rev. A 19.06.19 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard Setup Run Hrs Hrs	Workcenter/Supplier	Sign-off
100	Purchasing	1 pcs	7/29/19	7/29/19	0.00 0.00	Purchasing - 1	
						Purchasing - 2	
						Purchasing - 3	
110	Packaging 2-1 - Receive - B4B	1 pcs	7/29/19	7/29/19	0.00 0.00	Packaging 2 - 1 - B4B	
						Packaging 2 - 2 - B4B	
						Packaging 2 - 3 - B4B	
						Packaging 2 - 5 - B4B	
						Packaging 2 - 4 - B4B	
						Packaging 2 - 6 - B4B	
						Packaging 2 - 7 - B4B	
						Packaging 2 - 8 - B4B	
						Packaging 2 - 9 - B4B	
						Packaging 2 - 10 - B4B	
						Packaging 2 - 11 - B4B	
						Packaging 2 - 12 - B4B	
						Packaging 2 - 13 - B4B	
						Packaging 2 - 14 - B4B	
						Packaging 2 - 15 - B4B	
						Packaging 2 - 16 - B4B	
						Packaging 2 - 17 - B4B	
						Packaging 2 - 18 - B4B	
						Packaging 2 - 19 - B4B	
						Packaging 2 - 20 - B4B	
						Packaging 2 - 21 - B4B	
						Packaging 2 - 22 - B4B	
						Packaging 2 - 23 - B4B	
						Packaging 2 - 24 - B4B	
						Packaging 2 - 25 - B4B	
						Packaging 2 - 26 - B4B	
						Packaging 2 - 27 - B4B	
						Packaging 2 - 28 - B4B	



Container No: S201950



Part: RB6872477

Job No: 196876

Serial No/Batch: S201950

Revision: 0

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaero.com

Date: 07/31/19

Plex 6/24/19 9:24 AM Dart.Guerin.Kimberley

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	RB6872477P	1	0	0
Part Specifications				
Specifications could not be found.				

Plex 6/24/19 9:24 AM Dart.Guerin.Kimberley



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PURCHASE ORDER

POHB043785



Supplier: ARR002-VU
Arrow Tech Machine Works
29751 E. Enid Road,
Unit C
Eugene, OR 97402 USA
Phone: 541-780-6938
Fax: 458-215-4938.

Attention: Ana
(541) 780-6938

Ship To:

PO No: POHB043785

PO Date: 6/19/19

Due Date: 7/29/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	196847	RB6872201P			Prop Flange Puller	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$2,048.20/Ea	\$2,048.20
2	196848	RB6891198P			Wrench	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$1,441.15/Ea	\$1,441.15
3	196849	RB6796966P	RB6796966P		RET. RING, FUEL CTR. DR. PLIER	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$827.00/Ea	\$1,654.00
4	196851	RB6795614P			Puller/Pusher Idler Gear Support Shaft	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$538.00/Ea	\$1,076.00
5	196852	RB6795984P			Power Turbine Holder Shaft	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$721.00/Ea	\$1,442.00
6	196853	RB6872550P			Compressor Rotor Coupler Adapter Holder	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$1,063.00/Ea	\$2,126.00
7	196854	RB23033037P			Holder Compressor Rotor Coupling Adapter	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$1,408.85/Ea	\$1,408.85
8	196855	RB6798981P			Prop Shaft Splined Adapter	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$1,207.45/Ea	\$1,207.45
9	196856	RB6795644P			Bearing Nut Wrench	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$1,387.95/Ea	\$1,387.95



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Items													
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10	196857	RB6795588P			Wrench-Holding, 32/64 Pitch 24 Tooth Spline	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$910.00/Ea	\$1,820.00
11	196858	RB23005022P	RB23005022P		INR. PWR. TURB. SHFT. MANDREL	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$1,645.40/Ea	\$1,645.40
12	196859	RB6795637P			Adapter	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$894.00/Ea	\$1,788.00
13	196860	RB6895528P			Rear Compressor Bearing Pusher	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$772.35/Ea	\$772.35
14	196861	RB6796949P			Accessory Gear Box Bearings Installation Drift	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$292.00/Ea	\$584.00
15	196862	RB6796948P			Drift Install/Removal Accessories Gear Box	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$310.00/Ea	\$620.00
16	196863	RB6872881P	RB6872881P		COMPR MTG INSERT WRENCH	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$327.00/Ea	\$654.00
17	196864	RB6798986P			Prop Shaft Bearing Puller Plate	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$720.10/Ea	\$720.10
18	196866	RB6798983P			Prop Shaft Assembly Drift	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$209.00/Ea	\$209.00
19	196867	RB6796946P			Install & Removal Accessory Gear Box Bearings Drift	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$353.00/Ea	\$706.00
20	196868	RB6795990P			Dummy Bearing Power Turbine Shaft Front	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$304.00/Ea	\$304.00
21	196869	RB6795993P			Joining And Separating, Power	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$389.50/Ea	\$389.50



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Items

Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
22	196870	RB23034275P			Adapter Pilot Rear Compressor Bearing Puller	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$340.00/Ea	\$340.00
							1 X JUL 30 2019						
23	196871	RB6798980P			Shaft Spanner Nut Wrench	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$1,479.15/Ea	\$1,479.15
							1 X JUL 30 2019						
24	196872	RB6798845P			Turbine 2Nd Stage Spline Adapter	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$1,038.35/Ea	\$1,038.35
			PS -				1 X JUL 30 2019						
25	196873	RB6872746P			Puller, Power Train Drive Gear Bearing	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$1,950.00/Ea	\$3,900.00
26	196874	RB6893361P			Power Turbine Coupling Inner Race Puller	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$1,071.60/Ea	\$1,071.60
27	196875	RB6872927P	RB6872927P		RED. GEAR FLANGED STUD WRENCH	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$340.64/Ea	\$681.28
							2 X JUL 30 2019						
28	196876	RB6872477P			Spanner Power Turbine Coupling Inner Nut Wrench	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$579.50/Ea	\$579.50
			PS -				1 X JUL 30 2019						
29	196877	RB6872202P			Prop Shaft Support Fixture	Firmed	-	7/29/19	1 Ea	0 Ea	1 Ea	\$503.50/Ea	\$503.50
							1 X JUL 30 2019						
30	196878	RB6795597P			Spanner Wrench	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$649.00/Ea	\$1,298.00
31	196882	RB6796941P			Seals Replacement, Accessories Gear Box	Firmed	-	7/29/19	2 Ea	0 Ea	2 Ea	\$4,053.00/Ea	\$8,106.00
			PS -				2 X JUL 30 2019						
32	196883	RB6798838P			Gas Producer Turbine Tie Bolt	Firmed	-	8/16/19	2 Ea	0 Ea	2 Ea	\$691.00/Ea	\$1,382.00
33	196884	RB6796918P			Install Turbine & Exh Colct Support Oil Bellows Seal Dft	Firmed	-	8/16/19	2 Ea	0 Ea	2 Ea	\$877.00/Ea	\$1,754.00



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Items

Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
34	196885	RB6795594P			Fixture- Assembly, Compressor Rotor	Firmed	-	8/16/19	1 Ea	0 Ea	1 Ea	\$1,519.00/Ea	\$1,519.00
							1 X JUL 30 2019						
35	196886	RB23033029P			Fixture Alignment Compressor Rotor Front	Firmed	-	8/16/19	1 Ea	0 Ea	1 Ea	\$3,962.50/Ea	\$3,962.50
36	196887	RB6895995-4P			Fixture- Alignment Compressor Rotor (2 Piece)	Firmed	-	8/16/19	1 Ea	0 Ea	1 Ea	\$347.70/Ea	\$347.70
37	196888	RB6887819P			Gas Producer & Power Turbine Supports Bearing Bore Checking Fixt	Firmed	-	8/16/19	1 Ea	0 Ea	1 Ea	\$1,711.34/Ea	\$1,711.34
38	196889	RB6883162P			Sump Assembly Pressure Test Fixture	Firmed	-	8/16/19	1 Ea	0 Ea	1 Ea	\$928.62/Ea	\$928.62
39	196890	RB6798925P			Gas Producer 2Nd Stage Wheel Locknut Crimper	Firmed	-	8/16/19	2 Ea	0 Ea	2 Ea	\$1,410.00/Ea	\$2,820.00
40	196895	RB6872880P			Compressor Mounting Inserts Checking Fixture	Firmed	-	8/16/19	2 Ea	0 Ea	2 Ea	\$1,905.00/Ea	\$3,810.00
41	196892	RB6796930P			Accessory Gear Box Install Plate	Firmed	-	8/16/19	2 Ea	0 Ea	2 Ea	\$841.00/Ea	\$1,682.00
42	196893	RB23006778P	RB23006778P		GUIDE SPUR ADAPTER GEAR SHAFT	Firmed	-	8/16/19	3 Ea	0 Ea	3 Ea	\$427.00/Ea	\$1,281.00
			PS				3 X JUL 30 2019						
Grand Total:												\$64,199.49	



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Canada

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PURCHASE ORDER POHB043785



Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A007 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION MAINTAINED BY SUPPLIER)

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Plex 7/30/19 3:41 PM dart.belanger.natasha



**PHGE Machineworks dba
Arrowtech Machineworks**

29751 E Enid Rd. Unit C
Eugene, Oregon 97402
Phone: (541) 780-6938
Fax: (458) 215-4938

Packing Slip

NO. 636 Page 2 of 2

Date: 7/27/2019
PO Ref: HB043785 ✓
Ship Via: Fedex Priority

Bill To:
Dart Aerospace
1270 Aberdeen St. Hawkesbury, ON
CANADA K6A 1K7

Ship To:
Dart Aerospace
1271 Aberdeen St. Hawkesbury, ON
CANADA K6A 1K8

Qty	Item	Part No.
1 ✓	TURBINE 2ND STAGE SPLINE ADAPTER	RB6798845 ✓
1 ✓	SPANR PWR TURB. CPLG INN NUT WRENCH	RB6872477 ✓
2 ✓	SEALS REPL ACCESSORIES GEAR BOX	RB6796941 ✓
3 ✓	GUIDE SPUR ADAPTER GEAR SHAFT	RB23006778 ✓

Received by:

Packaged by:

Checked by:

Thank You

DART
AEROSPACE

A. Customer Information		B. Part Information	
Date: 7/25/19		Part Number: All components on this PO	
Name: ArrowTech Machine Works		Description: Substitution Materials	
Contact: Gabriel Escobar		Revision: n/a	
Phone #: 541-780-6938		PO Number: HB043785	
Requestor Title: Production Manager		Quantity of parts affected: Where Applies	
C. Deviation Information			
Deviation Request is:			
Product Related	XX	1st Time	☐
Process Related	☐	Repeat	XX
		Permenant	XX
		Temporary	☐
		Duration	
Customer Requirement	Requested Deviation	Reason for Deviation	
Material 4130 and 4340 / 2024 alum	4140/4142 & 6061 alum.	Material availability	

DART SUPPLIER DEVIATION REQUEST



D. Corrective Action Taken		E. Preventive Action	
F. DART Approvals	Signature	Date	Approve / Disapprove
Purchasing			
Engineering	<i>M. Lee</i>	July 26, 2019	Approved
Manufacturing			
Quality			
Other			
G. Deviation (Completed by DART)			
Drawing Change Required?	Yes ☐	No ☒	If Yes ECN / URF Number:
Supplier Corrective Action Request Required?	Yes ☐	No ☐	If Yes SCAR Number:
It is acceptable to use 4140/4142 in place of 4130/4340. It is acceptable to use 6061 in place of 2024. For the components listed on POHB043785.			

DART
AEROSPACE

H:\forms\Quality Assurance\approved QA\Supplier Deviation Request revNC

DART SUPPLIER DEVIATION REQUEST



D. Corrective Action Taken		E. Preventive Action	
F. Request Approval	Signature	Date	Approve / Disapprove
Purchasing			
Engineering	<i>M. Lee</i>	July 26, 2019	Approve
Manufacturing			
Quality			
Other			
G. Disposition (Completed by DART)			
Drawing Change Required?	Yes ☐	No ☒	If Yes ECN / URF Number:
Supplier Corrective Action Request Required?	Yes ☐	No ☐	If Yes SCAR Number:
No change to fit, form or function			



ARROW TECH MACHINE WORKS

Certificate of Conformance

Your Purchase Order No: HB043785 ✓

Dated: 7/27/2019

Our Order / Job No: AWT-HB043785 A28

Order Qty: 1 ✓

Part Name: SPANNER POWER TURBINE COUPLING INNER NUT WRENCH

Part Number RB6872477 ✓

Lot Size: N/A

Ship Date: 7/27/2019

We certify that these parts shipped to you are of domestic or international manufacture and conform to all requirements of the Purchase Order. These parts have been manufactured and inspected in accordance with all required specifications, instructions and drawings. Any applicable specifications are listed below:

Drawing Number: RB6872477

Rev: 0

Material Size and Type: 4142 STEEL

Material Specifications: STEEL: ASTM A108

Heat Treatment: 38.0 - 38.0 HRC

Plating/Finish: ZINC PLATE: ASTM B633 TYPE 1 SC 2

Mercury Contamination: The material used to process this order has not come in contact with mercury or mercury bearing instruments.

Date: 7/25/19

Signed: Hernan M. Latorre

PHGE Machine Works LLC dba Arrow Tech Machine Works
29751 E. Enid Rd. Unit C Eugene, Oregon 97402
Main: (541) 780-6938 | Fax: (458) 215-4938
www.atechmachineworks.com